The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HUGH STEPHEN LAVER
and
PETER NESVADBA

Appeal No. 2003-0819
Application No. 09/872,928

ON BRIEF

Before OWENS, DELMENDO, and MOORE, Administrative Patent Judges.

DELMENDO, Administrative Patent Judge.

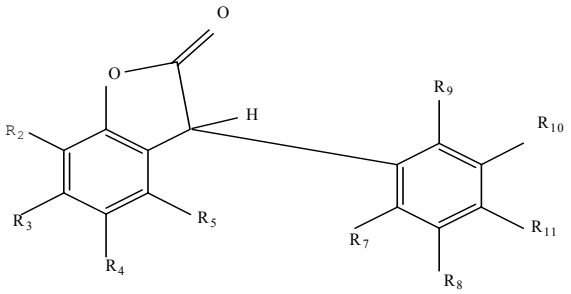
DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 (2002) from the examiner's refusal to allow claims 14 through 17 and 19 through 30, which are the claims pending in the above-identified application.[1]

[1] In reply to the final Office action mailed Mar. 28, 2002 (paper 7), the appellants submitted on Jul. 5, 2002 (i) an amendment pursuant to 37 CFR § 1.116 (2001) (paper 8) and (ii) a declaration pursuant to 37 CFR § 1.132 (2000) executed by Sevgi

The subject matter on appeal relates to: (i) a heat-curable powder coating composition (claims 14-17 and 19-24); (ii) a process for reducing the discoloration of heat-cured powder coating compositions (claim 25-28); and (iii) a heat-cured film (claims 29 and 30). Further details of this appealed subject matter are recited in representative claims 14 and 25 reproduced below:

> 14. A heat-curable powder coating composition comprising
>
> a) an epoxy resin, a polyester-hydroxyalkylamide, a polyester-glycoluril, an epoxy-polyester resin, a polyester-triglycidyl isocyanurate, a hydroxy-functional polyester-blocked polyisocyanate, a hydroxy-functional polyester-uretdione, an acrylate resin with hardener or a mixture of such resins,
>
> b) as stabilizer at least one compound of the formula V

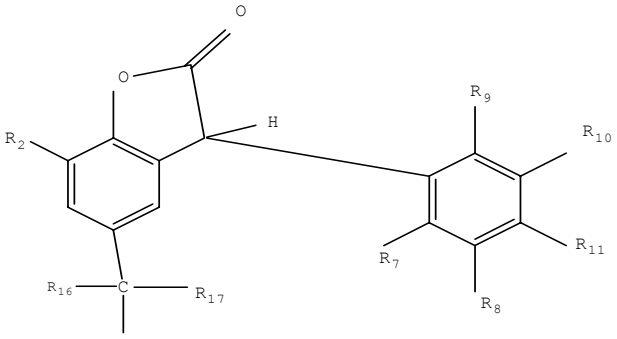


(V)

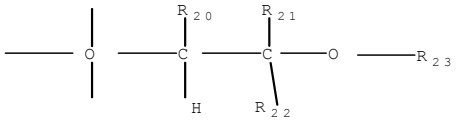
> in which

Zeren (paper 9). The examiner indicated that the amendment will be entered for purposes of this appeal. (Advisory action mailed Jul. 19, 2002.) As to the Zeren declaration, the examiner appears to have entered this evidence as well. (Examiner's answer mailed Dec. 12, 2002, paper 15, p. 6).

R_2 is hydrogen or C_1-C_6alkyl,
R_3 is hydrogen,
R_4 is hydrogen, C_1-C_6alkyl or a radical of the formula IIIa



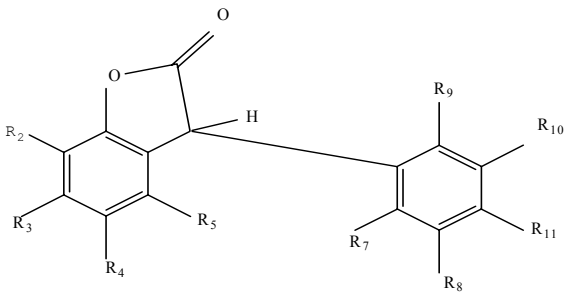
(IIIa)

R_5 is hydrogen,
R_7, R_8, R_9 and R_{10} independently of one another are hydrogen, C_1-C_4alkyl or C_1-C_4alkoxy,
R_{11} is hydrogen, C_1-C_4alkyl or C_1-C_4alkoxy, C_2-C_8alkanoyloxy or  , with the proviso that at least two of the radicals R_7, R_8, R_9, R_{10} and R_{11} are hydrogen;
R_{16} and R_{17}, together with the C atom to which they are attached, form an unsubstituted or mono- to tri-C_1-C_4alkyl-substituted cyclohexylidene ring,
R_{20}, R_{21} and R_{22} are hydrogen, and
R_{23} is C_2-C_{18}alkanoyl, and

c) at least one additive selected from the group consisting of organic phosphates or phosphonites.

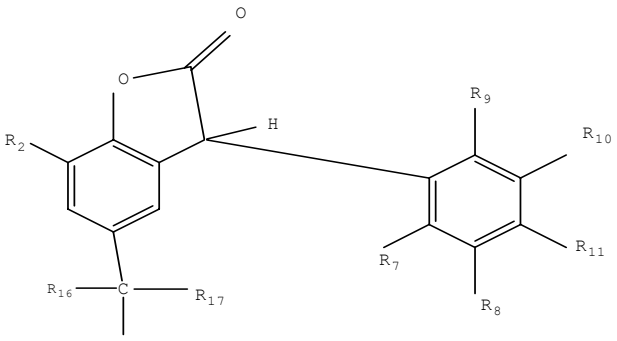
25. A process for reducing the discoloration of heat-cured powder coating compositions comprising epoxy resins, polyester-hydroxyalkylamides, polyester-glycolurils, epoxy-polyester resins, polyester-triglycidyl isocyanurates, hydroxy-functional polyester-blocked polyisocyanates, hydroxy-functional polyester-uretdiones, acrylate resins with hardener or a mixture of such resins, which comprises incorporating into or applying to these compositions before curing

at least one compound of the formula V



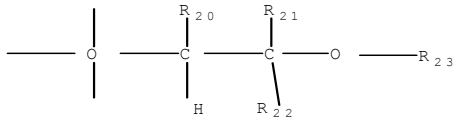
(V)

in which
R_2 is hydrogen or C_1-C_6alkyl,
R_3 is hydrogen,
R_4 is hydrogen, C_1-C_6alkyl or a radical of the formula IIIa



(IIIa)

R_5 is hydrogen,
R_7, R_8, R_9 and R_{10} independently of one another are hydrogen, C_1-C_4alkyl or C_1-C_4alkoxy,
R_{11} is hydrogen, C_1-C_4alkyl or C_1-C_4alkoxy, C_2-



C_8alkanoyloxy or , with the proviso that at least two of the radicals R_7, R_8, R_9, R_{10} and R_{11} are hydrogen;
R_{16} and R_{17}, together with the C atom to which they are attached, form an unsubstituted or mono- to tri-C_1-C_4alkyl-substituted cyclohexylidene ring,
R_{20}, R_{21} and R_{22} are hydrogen, and
R_{23} is C_2-C_{18}alkanoyl, and

at least one additive selected from the group consisting of organic phosphates or phosphonites.

The examiner relies on the following prior art references as evidence of unpatentability:

Ertl	4,745,192	May 17, 1988
Dubs et al. (Dubs)	5,175,312	Dec. 29, 1992
Nozaki et al. (Nozaki)	5,310,848	May 10, 1994
Nesvadba et al. (Nesvadba)	5,516,920	May 14, 1996
Malik et al. (Malik)	5,679,733 (effective filing date	Oct. 21, 1997 Jun. 1, 1993)
Daly et al. (Daly)	5,708,039 (effective filing date	Jan. 13, 1998 Dec. 12, 1994)
Valet et al. (Valet)	5,753,729 (effective filing date	May 19, 1998 May 11, 1994)
Kaplan et al. (Kaplan)	5,847,057 (effective filing date	Dec. 8, 1998 Oct. 30, 1997)

Claims 14 through 17 and 19 through 30 on appeal stand rejected under 35 U.S.C. § 103(a) as unpatentable over "Ertl [], Malik [] or Valet [], in view of Dubs [] or Nesvadba [], further in view of Nozaki [], Daly [] or Kaplan..." (Answer, pages 3-6.)

We affirm.[2]

[2] The appellants submit: "The composition claims, 14-24 [sic], the process claims 25-26 and 27-28 and the polymer film

Ertl describes 1-oxa-3-oxo-4,8-diazo-spiro[4,5]decane light stabilizers for protecting various polymers from the damaging effects of UV radiation. (Abstract; column 1, lines 5-22.) Ertl further teaches that the polymers include epoxide resins as well as two-component acrylate resin coatings composed of acrylate resin containing hydroxy groups and aliphatic or aromatic isocyanates. (Column 7, lines 11-60.) Ertl also teaches "[p]owder coatings which are known per se and which have been treated, for example, with a solution of the compounds." (Column 7, lines 60-63.) According to Ertl, "further stabilizers" such as benzofuran-2-one and phosphorus-containing compounds such as trinonylphenyl phosphite may be used in addition to the 1-oxa-3-oxo-4,8-diazo-spiro[4,5]decane light stabilizers. (Column 8, lines 1-36.)

Malik describes a solid solution composition comprising a melt blend of (a) a 2,2,6,6-tetraalkylpiperidinyl compound having a low molecular weight and (b) a 2,2,6,6-

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claims, 20-30 [sic], are each argued separately." (Appeal brief filed Oct. 1, 2002, paper 14, p. 5.) We understand this somewhat confused statement to mean that the appellants intended to argue the process claims (claims 25-28) and the film claims (claims 29 and 30) separately from the heat-curable powder coating compositions (claims 14-17 and 19-24). In the "ARGUMENT" section of the brief, however, the appellants do not provide any arguments in support of the separate patentability of claims 29 and 30. Accordingly, we confine our discussion to claims 14 and 25. See 37 CFR § 1.192(c)(7)(1995).

tetraalkylpiperidinyl compound having a high molecular weight. (Column 1, lines 9-37.) The solid solution composition is said to be an "excellent stabilizer for polymeric materials," such as epoxy resins. (Abstract; column 13, lines 7-36.) Malik further teaches that other antioxidants including "benzofuran-2-ones, indolin-2-ones and sterically hindered phenols, sulphur and phosphorous containing compounds and mixtures thereof," may be added to the solid solution stabilizer composition. (Column 16, lines 40-47.) Preferred phosphorus containing co-stabilizers are said to include certain phosphite and phosphonite compounds. (Column 17, lines 6-12.) Like Ertl, Malik teaches that the solid solution is suitable in powder coating compositions. (Column 17, lines 47-50.)

In a similar fashion, Valet describes a coating composition (e.g., a powder coating) comprising: (A) a binder based on an organic polymer (e.g., epoxy resin or functional acrylate resin and a crosslinking agent); and, as a stabilizer against damage by light, heat, and oxygen, (B) a 2-(2'hydroxyphenyl)-1,3-pyrimidine derivative. (Column 1, lines 7-12; column 1, line 39 to column 3, line 26; column 8, lines 46-63; column 12, lines 45-48; column 13, lines 6-12.) Valet further teaches that other stabilizers such as phosphates, phosphonites, and benzofuranones

may also be added. (Column 25, line 65 to column 26, line 6; column 30, lines 10-27 and 55-67.)

Nesvadba teaches 3-arylbenzofuranone-type compounds within the scope of the here recited formula (V) as stabilizers for polymers such as crosslinkable acrylic resins and epoxy resins. (Column 1, lines 3-8; column 1, line 19 to column 6, line 3; column 24, line 26 to column 27, line 55.) According to Nesvadba, the 3-arylbenzofuranone-type stabilizers may be used together with other stabilizers, preferably an organic phosphite or phosphonite compound, to provide excellent stabilizing effects. (Column 33, lines 33-32; column 34, lines 10-12.) In addition, Nesvadba teaches that the stabilizers may be incorporated into the polymer in pure form to form compositions. (Column 33, lines 49-51.)

Given these prior art teachings, we share the examiner's view (answer, page 4) that one of ordinary skill in the art would have been led to use Nesvadba's combination of 3-arylbenzofuranone and organic phosphite or phosphonite in the powder coating compositions of Ertl, Malik, or Valet, thus arriving at a composition encompassed by appealed claim 14 or a process encompassed by appealed claim 25, with the reasonable expectation of achieving excellent stabilization against thermal, oxidative, or light-induced degradation. As required

under 35 U.S.C. § 103, both the suggestion to combine the references and the reasonable expectation of success are founded in the prior art, not in the appellants' own disclosure. In re Vaeck, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991)(citing In re Dow Chemical Co., 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988)).

Once a prima facie case of obviousness is established, the burden of going forward with persuasive argument or evidence (e.g., unexpected results) is on the applicant. In re Mayne, 104 F.3d 1339, 1343, 41 USPQ2d 1451, 1455 (Fed. Cir. 1997) ("With a factual foundation for its prima facie case of obviousness shown, the burden shifts to applicants to demonstrate that their claimed fusion proteins possess an unexpected property over the prior art."). The question as to whether unexpected advantages have been demonstrated is a factual question. Id. (citing In re Johnson, 747 F.2d 1456, 1460, 223 USPQ 1260, 1263 (Fed. Cir. 1984)). Thus, it is incumbent upon the appellants to supply the factual basis to rebut the prima facie case of obviousness established by the examiner. See, e.g., In re Klosak, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972).

The appellants argue that "[o]mission of the HALS compounds [i.e., 1-oxa-3-oxo-4,8-diazo-spiro[4,5]decane light

stabilizers], which are not within the ambit of the present claims, from the polymer compositions is unsuggested [sic]" in Ertl. (Appeal brief, page 6.) This argument lacks merit. As pointed out by the examiner (answer, pages 4-5), the term "comprising" in appealed claim 14 opens the claimed composition to unrecited components. It is by now axiomatic that the term "comprising" in a claim not only alerts potential infringers that the recited components are essential, but that other unrecited components may be present and still form a construct within the scope of the claim. See, e.g., In re Baxter, 656 F.2d 679, 686, 210 USPQ 795, 802 (CCPA 1981).

The appellants contend that the phrase "a solution of the [HALS] compounds" at column 7, line 62 of Ertl is incomprehensible to one of ordinary skill in the art. (Appeal brief, page 6.) The appellants, however, have not provided any evidentiary basis to doubt the accuracy of Ertl's disclosure. Regardless, appealed claim 14 or 25 fails to exclude "a solution of the [HALS] compounds."

The appellants urge that "the instant invention is [] a selection invention with regard to both the stabilizer combination and substrate stabilized." (Appeal brief, pages 6 and 9-10.) But the mere fact that the claimed invention is a "selection invention" does not preclude a conclusion of

obviousness.[3] While the disclosures of the references are admittedly generic to many possibilities, so too is the invention recited in the appealed claims.

Without any specific analysis, the appellants allege that the Zeren declaration provides evidence of nonobviousness over the applied prior art references. We disagree for at least two significant reasons.

First, the declaration evidence does not include a comparison between the invention recited in appealed claim 14 or 25 against the closest prior art.[4] For example, we point out that the polymeric component used in the examples of the declaration is a "carboxylic acid-functional polyester resin," which is not recited in the appealed claims. In addition, the comparative examples are not reflective of the class of compositions described in Ertl, Malik, or Valet.

Second, the relied upon showing is far from being commensurate in scope with the broad patent protection sought by

[3] Merck & Co. Inc. v.Biocraft Labs. Inc., 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989)("That the [prior art reference] discloses a multitude of effective combinations does not render any particular formulation less obvious.").

[4] In re Baxter Travenol Labs, 952 F.2d 388, 392, 21 USPQ 1281, 1285 (Fed. Cir. 1991) ("[R]esults must be shown to be unexpected compared with the closest prior art.").

appealed claim 14 or 25.[5] The examples in the declaration are limited to a specific polymer, a specific phosphorus compound, and a specific mixture of two stabilizer compounds (Va) and (Vb) in specified amounts. The appealed claims, on the other hand, are not reasonably limited to be commensurate in scope with this proffered showing. Instead, the appealed claims embrace thousands, if not millions, of possible combinations of stabilizer compounds and polymers.

Regarding Malik, the appellants argue that "[t]here is not a single example [] that shows the stabilization of a coating, much less a powder coating." (Appeal brief, page 8.) This argument also fails. One of ordinary skill in the art would not have considered the disclosures of the references to be limited to their preferred embodiments or working examples. Merck, 874 F.2d at 807, 10 USPQ2d at 1846; In re Fracalossi, 681 F.2d 792, 794 n.1, 215 USPQ 569, 570 n.1 (CCPA 1982); In re Lamberti, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976).

[5] In re Kulling, 897 F.2d 1147, 1149, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990) ("'[O]bjective evidence of nonobviousness must be commensurate in scope with the claims.'")(quoting In re Lindner, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972)); In re Dill, 604 F.2d 1356, 1361, 202 USPQ 805, 808 (CCPA 1979) ("The evidence presented to rebut a prima facie case of obviousness must be commensurate in scope with the claims to which it pertains.").

Regarding Valet, the appellants urge that the Laver declaration filed Oct. 1, 2002 provides evidence of "surprisingly better stabilizing results" for the claimed invention. (Appeal brief, page 8.) We disagree, because the Laver declaration suffers from the same infirmities as the Zeren declaration.

Regarding claim 25, the appellants contend that "[n]one of the primary references even recognizes the problem of discoloration of heat cured powder coating compositions..." (Appeal brief, page 11.) This position is also without merit. Ertl, Malik, and Valet all disclose powder coating compositions and are concerned with stabilization of the compositions.

We do not have to address the other remaining applied prior art references because they are unnecessary to support the examiner's rejection as to appealed claim 14 or 25.

Finally, we do not find any of the arguments set forth in the reply brief filed Feb. 12, 2003 (paper 16) to be persuasive for the reasons discussed above.

In summary, we affirm the examiner's rejection under 35 U.S.C. § 103(a) of appealed claims 14 through 17 and 19 through 30 as unpatentable over "Ertl [], Malik [] or Valet [], in view of Dubs [] or Nesvadba [], further in view of Nozaki [], Daly [] or Kaplan..."

The decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

Terry J. Owens Administrative Patent Judge	)
Romulo H. Delmendo Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
James T. Moore Administrative Patent Judge	)

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